

# Notice of Allowability

Application No.

09/516,792

Examiner

Stefano Karmis

Applicant(s)

WALLMAN, STEVEN H. M.

Art Unit

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 19 September 2005.
2. ☒ The allowed claim(s) is/are 11,22,30,40,62 and 85.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

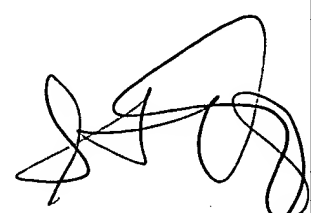
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



### **DETAILED ACTION**

1. This communication is in response to Applicant's amendment filed on 19 September 2005.

#### ***Status of Claims***

2. Claims 1-10, 12-21, 23-29, 31-39, 41-61, 63-84, 86 and 87 are cancelled. Claims 11, 22, 30, 40, 62 and 85 are currently amended. Therefore claims 11, 22, 30, 40, 62, and 85 are pending.

#### ***Allowable Subject Matter***

3. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record, Breen et al. (hereinafter Breen) U.S. Patent 6,615,188, teaches combining a value-based order for at least one instrument and a share-based order (column 9, lines 18-32). These orders are combined to form a plurality of contingent orders. Orders are aggregated for a designated time period, whereupon a plurality of contingent orders are executed according to the stock. Each stock has a plurality of contingent orders, due to the order being executed a plurality of times throughout the day (column 10, lines 1-24).

The prior art of record fails to teach a method for processing a plurality of orders for at least one instrument comprising: converting the final trading order into a series of contingent orders for the at least one instrument specifying a number of shares of the at least one instrument to be traded at a schedule of prices, further comprising calculating the number of shares of the at least one instrument in the schedule of prices according to the following equations:

for a buy order:

$$S^* = (N_i^b - N_i^s) + \frac{N_i^b}{P^*} - \frac{N_i^s}{P_m}$$

$$P^* = \begin{cases} \frac{-\beta \pm \sqrt{\beta^2 - 4\alpha\gamma}}{2\alpha} & \text{if } \alpha \neq 0 \\ \frac{\gamma}{\beta} & \text{if } \alpha = 0 \end{cases}$$

wherein:

$$\alpha = N_i^b,$$

$$\beta = N_i^b - N_i^s P_m - N_i^s - P_m \left( N_i^b - N_i^s - \frac{N_i^s}{P_m} \right), \text{ and}$$

$$\gamma = -P_m N_i^b;$$

for a sell order:

$$S^* = (N_i^b - N_i^s) + \frac{N_i^b}{P_m} - \frac{N_i^s}{P^*}$$

$$P^* = \begin{cases} \frac{-\beta \pm \sqrt{\beta^2 - 4\alpha\gamma}}{2\alpha} & \text{if } \alpha \neq 0 \\ \frac{\gamma}{\beta} & \text{if } \alpha = 0 \end{cases}$$

where

$$\alpha = -N_i^s,$$

$$\beta = -N_i^s + N_i^b P_m + N_i^b - P_m \left( -N_i^s + N_i^b + \frac{N_i^b}{P_m} \right), \text{ and}$$

$$\gamma = P_m N_i^s;$$

wherein:

$S^*$  = the number of shares of the at least one instrument to be bought or, if negative, sold at a particular price  $P^*$ ;

$N_s^b$  = a number of shares of the at least one instrument to be bought in the plurality of share-based trading orders;

$N_s^f$  = a number of shares of the at least one instrument to be sold in the plurality of share-based trading orders;

$N_d^b$  = a dollar amount of the at least one instrument to be bought in the plurality of dollar-based trading orders; and

$N_d^f$  = a dollar amount of the at least one instrument to be sold in the plurality of dollar-based trading orders.

For these reasons claims 11, 22, 30, 40, 62, and 85 are deemed to be allowable over the prior art of record.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefano Karmis whose telephone number is (571) 272-6744. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted  
Stefano Karmis  
18 November 2005



HANI M. KAZIMI  
PRIMARY EXAMINER